Site Design Consultants

Civil Engineers • Land Planners

March 27, 2013

RECEIVED
PLANNING DEPARTMENT
MAR 27 2013
TOWN OF YORKTOWN

Mrs. Robyn Steinberg, AICP
Yorktown Planning Department
1974 Commerce Street
Yorktown Heights, NY 10598

Re: Faith Bible Church

Dear Robyn:

We have revised the site plans for Faith Bible Church. The revisions reflect modifications based on the discussions at the last Planning Board Meeting which resulted in the relocation of the painted crosswalk further away from the intersection, relocation of the access walk, and additional traffic signage identifying the crosswalk.

Enclosed please find the following items for the above referenced project for submission for the Planning Board Meeting on April 8, 2013:

- Ten copies of Sheets 1 and 4 of 10, from the plan set titled "Proposed Site Plan Prepared for Faith Bible Church," dated 6/4/09, last revised 3/14/13; and Sheet 1 of 1 titled "Overflow Parking Plan;"
- Ten copies of the letter to John Tegeder from Philip J. Grealy of Maser Consulting P.A., dated March 27, 2013;

Please place this project on the agenda for April 8. Please advise us if you need additional copies or information. Thank you.

Sincerely,

Joseph C. Riina, P.E.

cc: C. Zottoli w/enc.
P. Grealy w/plans
L. Dalfino w/enc.
A. Capellini w/enc.

/cm/enc./sdc 06-44

251-F Underhill Avenue • Yorktown Heights, New York 10598
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MASER
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RECEIVED
PLANNING DEPARTMENT
MAR 27 2013
TOWN OF YORKTOWN

March 27, 2013

VIA EMAIL

Mr. John Tegeder, R.A.
Director of Planning
Town of Yorktown
1974 Commerce Street, Room 222
Yorktown Heights, NY 10598

Re: Faith Bible Church
Yorktown, New York
MC Project No. 12100087A

Dear Mr. Tegeder:

We have received the Traffic Impact Analysis and Site Plan Review report for the Faith Bible Church Expansion and Renovation prepared by Jacobs Civil Consultants, Inc. dated March, 2013. The following are our responses to each of his specific comments.

Traffic Impact Analysis

Jacobs has indicated that they are in agreement with the existing traffic volumes collected by our office, which are used as the basis of analysis in our Traffic Impact Study. The Jacobs analysis of existing conditions also confirms our capacity analysis which indicates that the study area intersections currently operate at a Level of Service "B" or better during peak hours. **No further response needed**

Review of Trip Generation and Distribution

The Jacobs report indicates that the Traffic Impact Study prepared by our office based the projected trip generation volumes on 252 seats however, **this is not the case. The Traffic Impact Study based the analysis of the projected trip generation volumes on the proposed 344 seats. As shown in Table No. 1 of our Traffic Impact Study (attached) the projected traffic volumes are based on the 344 seats and match the trip generation volumes for the Weekday and Sunday Peak Hours contained in Table No. 1 of the Jacobs report.** Our Traffic Impact Study had also contained Table No. 1A (attached), which summarizes the projected trip generation for a 252 seat church. The 252 seats represent the total number of seats that could be provided at the church without the stacked parking. The analysis contained in our Traffic Impact Study also did not take any credit for existing trips generated by the church to provide a conservative analysis.

It should also be noted that the Sunday Peak Hour analysis is conservative since the trip generation estimates based on the ITE database assume a church will have multiple Sunday services at which people are entering and existing during the same hour. However, the Faith Bible Church has only one Sunday service and the departure of patrons from this service tends to be spread over several hours since there are other associated activities that occur after the service.

Review of Traffic Conditions

The Jacobs analysis confirms the 2015 No-Build Traffic Volumes contained in our Traffic Impact Study as well as the results of the capacity analysis which indicate that the study area intersections will operate at a Level of Service "C" or better. **No further response needed.**

Future with Proposed Project

The Jacobs analysis indicates that the analysis contained in our Traffic Impact Study is based on inaccurate trip generation information, however at previously discussed this is not the case. The Jacobs report also confirms the results of the capacity analysis contained in our Traffic Impact Study which indicate that the study area intersections will operate at a Level of Service "C" or better with the proposed project and therefore will not likely result in significant adverse traffic impacts. **No further response needed.**

As indicated by the Section 2B.07-Multi-Way Stop Applications of the Manual on Uniform Traffic Control Devises, 2009 Edition (see attached) multi-way stop control should be used where the volume of traffic on the intersecting roads is approximately equal. The intersection of Mohegan Avenue and Sagamore Avenue meets this requirement. Furthermore, Section 2B.07 Item 04 provides further guidance. Items 04.A and 04.B do not apply to this intersection. Item 04.C indicates the minimum volumes that must be met for the installation of a multi-way stop control. Using the 70 percent values of Item 04.C.1 and 2, the requirements of Item 04.C.1 and 2 are met during the PM and Sunday Peak Hours under Build Conditions.

Other guidance for when an all-way stop control should be considered are summarized in Section 2B-07 Item 05. These included 1) the need to control left-turn conflicts 2) the need to control vehicle/pedestrian conflicts and 3) the intersection of two residential neighborhood collector streets of similar design where multi-way stop control would improve traffic operation. The intersection of Mohegan Avenue and Sagamore Avenue meets each of these criteria as the all-way stop control is proposed to control the left turn movements at the intersection which has an unconventional alignment and there is a need to control vehicle/pedestrian conflicts, especially on the Sagamore Avenue approach. Furthermore, Sagamore Avenue and Mohegan Avenue are both residential collector streets of similar design and operating characteristics and as shown by the capacity analysis contained in the Traffic Impact Study, the installation of an all-way stop control will improve operating conditions.

The Site Plan prepared by Site Design Consultants dated March 13, 2013 provides the proposed signing and striping modifications at the intersection of Mohegan Avenue and Sagamore Avenue associated with the proposed all-way stop control. In addition, signing and striping details have been provided for the proposed crosswalk from the parking lot on the north side of Sagamore Avenue to the Church. A copy of the site plan is attached for your reference.

Site Plan Review – On-Site Parking

The Traffic Impact Study had noted the potential use of an off-site parking lot in the event of overflow parking at the proposed site. The Applicant has indicated that they are in discussion with the existing Learning Experience Daycare Center which is located on the south side of Mohegan Avenue near the intersection of U.S. Route 6 to use this parking area for overflow parking as needed. The Learning Experience site is approximately 500 ft. west of the church site and the Applicant has indicated that a shuttle service will be provided using the church's van to accommodate movement between the lot and the church.

Very truly yours,

MASER CONSULTING P.A.

Philip J. Grealy, Ph.D., P.E.
Principal Associate/Department Manager

PJG/rgd
Enclosures
cc: J. Riina [w/ enclosures]
R. Domiguez [w/ enclosures]
C. Zottoli [w/ enclosures]

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TABLE NO. 1

HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

FAITH BIBLE CHURCH YORKTOWN, NY	ENTRY		EXIT	
	HTGR*	VOLUME	HTGR*	VOLUME
CHURCH (344 SEATS)				
PEAK PM HOUR	0.03	10	0.02	8
PEAK PM CHURCH HOUR	0.12	41	0.07	24
PEAK SUNDAY HOUR	0.31	107	0.30	103

NOTES:

1) * THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 8TH EDITION, 2008. ITE LAND USE CODE - 560 - CHURCH.

TABLE NO. 1A

HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

FAITH BIBLE CHURCH YORKTOWN, NY	ENTRY		EXIT	
	HTGR*	VOLUME	HTGR*	VOLUME
CHURCH (252 SEATS)				
PEAK PM HOUR	0.03	7	0.02	6
PEAK PM CHURCH HOUR	0.16	41	0.10	24
PEAK SUNDAY HOUR	0.31	79	0.30	75

NOTES:

1) * THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 8TH EDITION, 2008. ITE LAND USE CODE - 560 - CHURCH.

Section 2B.06 STOP Sign Applications

Guidance:

01 *At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs (see Sections 2B.08 and 2B.09).*

02 *The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:*

- A. *The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;*
- B. *A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or*
- C. *Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.*

Support:

03 The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.

Section 2B.07 Multi-Way Stop Applications

Support:

01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

Guidance:

03 *The decision to install multi-way stop control should be based on an engineering study.*

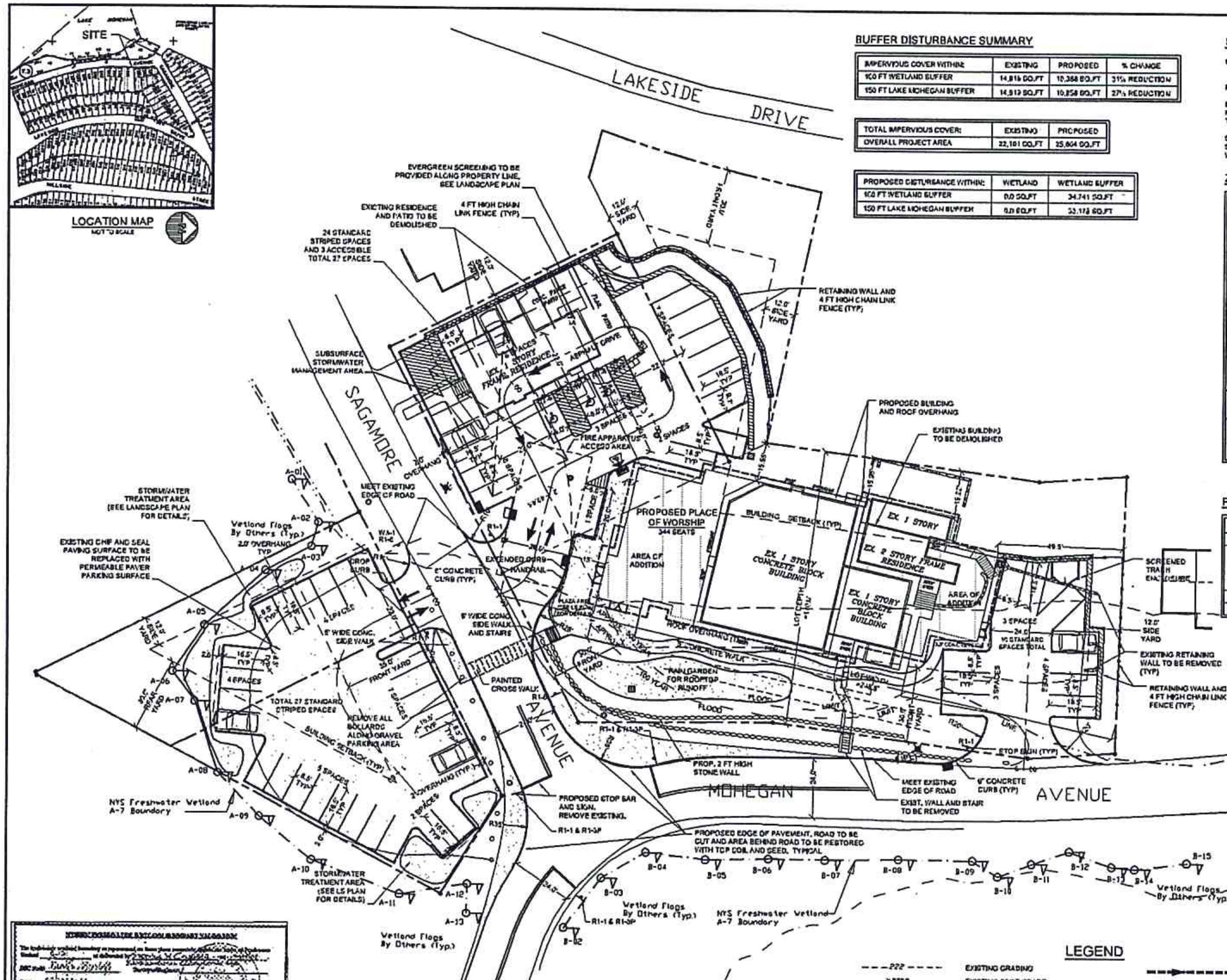
04 *The following criteria should be considered in the engineering study for a multi-way STOP sign installation:*

- A. *Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
- B. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
- C. *Minimum volumes:*
  1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
  2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
  3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
- D. *Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

Option:

05 Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.



BUFFER DISTURBANCE SUMMARY

IMPERVIOUS COVER WITHIN:	EXISTING	PROPOSED	% CHANGE
100 FT WETLAND BUFFER	14,816 SQ.FT	10,368 SQ.FT	31% REDUCTION
150 FT LAKE MOHEGAN BUFFER	14,919 SQ.FT	10,858 SQ.FT	27% REDUCTION

TOTAL IMPERVIOUS COVER:	EXISTING	PROPOSED
OVERALL PROJECT AREA	22,101 SQ.FT	25,604 SQ.FT

PROPOSED DISTURBANCE WITHIN:	WETLAND	WETLAND BUFFER
100 FT WETLAND BUFFER	0.0 SQ.FT	34,741 SQ.FT
150 FT LAKE MOHEGAN BUFFER	0.0 SQ.FT	33,178 SQ.FT

SITE DATA:

OWNER / DEVELOPER:	FAITH BIBLE CHURCH 3500 MOHEGAN AVENUE MOHEGAN LAKE, NY
PROJECT LOCATION:	3500 MOHEGAN AVENUE MOHEGAN LAKE, NY
EXISTING TOWN ZONING:	R1-16, SINGLE FAMILY RESIDENTIAL
PROPOSED USE:	R1-16, SINGLE FAMILY RESIDENTIAL
TOWN TAX MAP DATA:	OLD: SECTION 3.21, BLOCK 7.1, LOTS 279-290, 297-299 & 315-319 NEW: SECTION 15.16, BLOCK 2, LOTS 9, 10, 50, 53 & 54
SITE AREA:	1.222 ACRES (53,265.33 SF)
SEWAGE FACILITIES:	PUBLIC SEWERS
WATER FACILITIES:	PUBLIC WATER FACILITIES

ZONING SCHEDULE:

ZONING DISTRICT:	R1-16, SINGLE FAMILY RESIDENTIAL		
DIMENSIONAL REGULATIONS:	REQUIRED	PROVIDED	VARIANCE REQUIRED
MINIMUM SIZE OF LOT:			
MINIMUM LOT AREA:	20,000 SF.	53,265.33 SF.	NONE
MINIMUM LOT WIDTH AT BLDG LINE:	96 FT.	246.56 FT.	NONE
LOT DEPTH:	100 FT.	116.66 FT.	NONE
MINIMUM YARD DIMENSIONS:			
PRINCIPAL BUILDING:			
FRONT YARD SETBACK:	30 FT.	20.4 FT.	YES
REAR YARD SETBACK:	30 FT.	14.5 FT.	YES - SEE BELOW
ONE SIDE YARD SETBACK:	12 FT.	49.5 FT.	NONE
COMBINED SIDE YARD SETBACK:	24 FT.	136.9 FT.	NONE
ACCESSORY BUILDINGS:			
REAR YARD SETBACK:	10 FT.	NA	NONE
ONE SIDE YARD SETBACK:	12 FT.	NA	NONE
COMBINED SIDE YARD SETBACK:	24 FT.	NA	NONE
MAXIMUM % OF LOT TO BE OCCUPIED:			
BUILDING COVERAGE:	25% OF LOT AREA	14.9 % OF LOT AREA	NONE
MAXIMUM HEIGHT:			
PRINCIPAL BUILDING - FEET:	35 FEET	35 FT	NONE
ACCESSORY BUILDING - FEET:	15 FEET	NA	NONE

PARKING SCHEDULE

REQUIRED PARKING:	1 SPACE PER 4 SEATS OR PEW SPACE
PLACE OF WORSHIP:	254 SEATS @ 1 SPACE / 4 SEATS = 64 SPACES
PROVIDED PARKING:	61 STANDARD STRIPED SPACES + 3 HANDICAP SPACES
STANDARD PARKING:	64 STANDARD STRIPED SPACES
OVERFLOW PARKING:	22 STACKED SPACES (SEE "OVERFLOW PARKING PLAN" FOR LAYOUT)
TOTAL PROVIDED PARKING:	86 SPACES FOR UP TO 344 SEATS
PARKING VARIANCE REQUIRED:	0 SPACES

GENERAL NOTES:

1. The Engineer whose seal appears hereon has not been retained for supervision of construction, subsequently he is not responsible for construction and therefore assumes no responsibility for construction practices, procedures, and results therefrom.
2. The Engineer shall not be held responsible or held accountable for the integrity of any structures constructed or under construction prior to the approval of the plans.
3. The Town Engineer's office is to be notified 24 hours before commencing site construction.
4. All work is to be completed in accordance with the Town's Code of Practice and Specifications.
5. All conditions, locations, and dimensions shall be field verified and the Engineer shall be immediately notified of any discrepancies.
6. All changes made to the plans shall be approved by the Engineer and any such changes shall be filed as amendments to the original Building Permit.
7. See plans prepared by Laurence Delfino Architect, PC for all building drawings, details and notes.
8. See plans prepared by DeLalla & Associates, LLC for all landscape and hardscape drawings, details and notes.
9. All written dimensions on the drawings shall take precedence over any scaled dimensions.
10. It is the Contractor's responsibility to call in a "CODE 53" at least 2 days but no more than 10 days prior to construction for underground utility locations.
11. Substructures and their encroachments below grade, if any, are not shown.
12. Contractor to verify all substructures encountered during construction.
13. Any proposed electric and/or telephone service lines are to be placed underground.
14. The Contractor shall supervise and direct the work using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work under the contract.
15. The Contractor shall be responsible to the Owner for the acts and omissions of his employees, subcontractors, and their agents and employees, and any other persons performing any of the work under a contract with the Contractor.
16. The Design Engineer disclaims any liability for damage or loss incurred during or after construction.
17. The contractor shall be responsible for obtaining all necessary permits for any blasting if required.
18. It shall be the Contractor's responsibility to notify the the Town Inspector in advance of his work or as the Inspector deems appropriate.
19. A Street Opening Permit shall be obtained from the Town of Yorktown as required for installations in public roads.
20. The contractor shall be responsible for obtaining all necessary permits for any blasting if required.
21. No topsoil shall be removed from the site.
22. All conditions of approval as noted in formal letters of approval or findings are a part of the approved site plan, subdivision or variance plats, drawings or plans, and are hereby referenced for additional approval details.

LEGEND

--- 222 ---	EXISTING GRADING
×222.8	EXISTING SPOT GRADE
— 100 —	PROPOSED GRADING
———	PROPERTY LINE / RIGHT OF WAY
— · — · —	PROPOSED ROAD CENTERLINE
———	PROPOSED 6" CONCRETE CURB
— — —	EDGE OF WETLAND
— — —	100' WETLAND BUFFER AND 150' LAKE BUFFER
— W —	EXISTING WATER LINE
▽	EXISTING FIRE HYDRANT
——▣	EXISTING DRAINAGE INLET
— S —Ⓢ	EXISTING SANITARY LINE
═══	EXISTING UTILITY TO BE REMOVED
——▶——	PROPOSED DRAINAGE LINE
▦	PROPOSED CATCH BASIN
Ⓓ	PROPOSED DRAINAGE MANHOLE
☒	PROPOSED OUTLET STRUCTURE
— FD —	PROPOSED FOOTING DRAIN
— RD —	PROPOSED ROOF DRAIN
— FM —	PROPOSED SEWER FORCE MAIN
— SS —	PROPOSED SEWER SERVICE CONNECTION
— WS —	PROPOSED WATER SERVICE CONNECTION
— UE —	PROPOSED UNDERGROUND ELECTRIC SERVICE
●	PROPOSED UTILITY CROSSING
▭▭▭	PROPOSED RETAINING WALLS
○○○	PROPOSED STONE OR OTHER WALL
- - - -	PROPOSED BUILDING FOOTPRINT
- - - -	EXISTING BUILDING FOOTPRINT TO BE REMOVED

SCALE: 1"=20'-0"
0 10 20 40

SAFE DIG
Before You Dig, Drill or Blast!

[illegible]

The [illegible] wetland boundary as represented on these plans [illegible] [illegible] as delineated by [illegible]

DEC Staff: [illegible]

Date: [illegible]

Seal: [illegible]

Wetland boundary delineations as validated by the New York State Department of Environmental Conservation [illegible]

Any proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or within 100 feet of the wetland boundary as depicted on this plan requires a permit from the NYS Department of Environmental Conservation under Article 24 of the Environmental Conservation Law [illegible]

NOTE:

1. THIS IS NOT A SURVEY. ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM "SURVEY OF PROPERTY PREPARED FOR FAITH BIBLE CHURCH" PREPARED BY JOHN [illegible], LAND SURVEYOR, [illegible] ASSOCIATES, DATED APRIL 14, 2004. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.
2. WETLAND DELINEATION AND FLAGGING PERFORMED ON DECEMBER 4, 2009 BY STEPHEN W. COLEMAN ENVIRONMENTAL CONSULTING, LLC. SURVEY SINCE UPDATED TO INDICATE WETLAND DELINEATION LIMITS.
3. THE TOWN OF YORKTOWN JURISDICTIONAL [illegible] WERE VERIFIED BY [illegible]
4. APPROXIMATE LIMITS OF 100-YEAR AND 500-YEAR FLOOD LINES AND APPROXIMATE LIMIT OF LAKE MOHEGAN TAKEN FROM AVAILABLE WESTCHESTER COUNTY GIS MAPS.

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 [illegible] OF THE NEW YORK STATE EDUCATION LAW.

Site Design Consultants
Civil Engineers • Land Planners
251-F Underhill Avenue, Yorktown Heights, NY 10598
(914) 962-4488 - Fax: (914) 962-7386
www.SiteDesignConsultants.com

Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. [illegible]

Revisions:

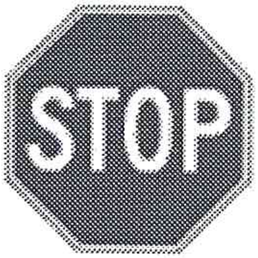
No.	Date	Comments
1	[illegible]	Per YTD Engineer
2	[illegible]	Wetland Notes
3	[illegible]	Rev. Title Layout
4	[illegible]	Storm & Sewer
5	[illegible]	Per YTD
6	[illegible]	Rev. Drive Per FD
7	[illegible]	Update Zoning
8	[illegible]	Traffic Impvts.
9	[illegible]	Per Town Comm.
10	[illegible]	Road Improvs.

Scale: 1" = 20'
Drawn by: JMC
Date: [illegible]

SITE PLAN

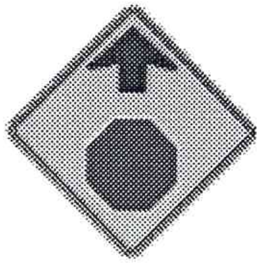
PROPOSED SITE PLAN
PREPARED FOR
FAITH BIBLE CHURCH
3500 MOHEGAN AVENUE
Town of Yorktown Westchester Co., New York

Sheet 1 of 10

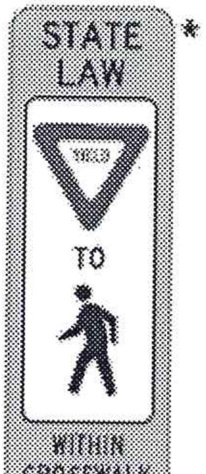


R1-1

R1-3P



W3-1



R1-6